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Intellectual Property Law Patents Trademarks Copyrights

January 5, 2004

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Applicants: Matt Ewert et al.**  
**Serial No.: 10/604,779**  
**Filing Date: 08/15/2003**  
**For: Early Detection of Pathogens in Blood**  
**Our Reference No.: 1372.49.PRC**

**Examiner: Unassigned**  
**Art Unit: 1644**

Dear Sir:

Enclosed please find the following:

1. Information Disclosure Statement By Applicants - 6 pages;
2. Copies of the front covers of sixty-two (62) Non-Patent Literature Documents; and
3. Self-addressed, postage prepaid post card to serve as a receipt for items 1-2.

Very respectfully,

**SMITH & HOPEN**

By: Anton J. Hopen  
*anton.hopen@baypatents.com*

AJH/sb  
enclosure

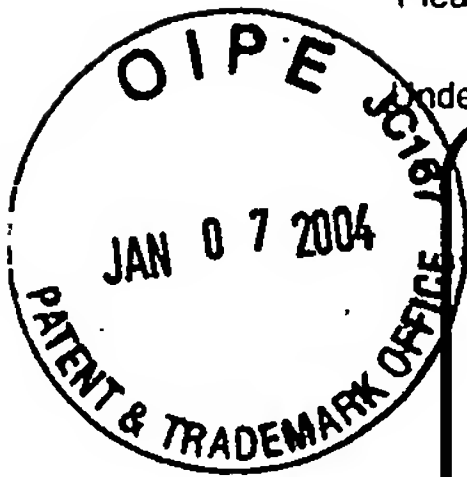
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Date: January 5, 2004

Shelley Butz

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Substitute for form 1449B/PTO		<b>Information if Known</b>	
		Application Number	10/604,779
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Filing Date	08/15/2003
		First Named Inventor	Matt Ewert
		Group Art Unit	1644
		Examiner Name	Unassigned
		Attorney Docket Number	1372.49.PRC
Sheet	1	of	6

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	1	Polymerase Chain Reaction for Rapid Diagnosis of Candidemia; Bull Acad Mil Med Science; Vol. 22, No. 3; September 1998.	
	2	ARCHIBALD ET AL.; Comparison of BACTEC MYCO/F LYTIC and WAMPOLE ISOLATOR 10 (Lysis-Centrifugation)...; Journal of Clinical Micro.; pg. 2994-2997; August 2000.	
	3	BRANNON ET AL.; Clinical Comparison of Lysis-Centrifugation and Radiometric Resin Systems for Blood Culture; Journal of Clinical Microbiology; pg. 886-887; November 1986.	
	4	SIERSEMA ET AL.; Blood Culture Bottles are Superior to Lysis-Centrifugation Tubes for Bacteriological Diagnosis...; Journal of Clinical Microbiology; pg. 667-669; March 1992.	
	5	HAMILTON ET AL.; Effect of Delay in Processing on Lysis-Centrifugation Blood Culture Results from Marrow Transplant Patients; Journal of Clinical Microbiology; pg. 1588-1593; July 1989.	
	6	BERNHARDT ET AL.; Detection of Bacteria in Blood by Centrifugation and Filtration; Journal of Clinical Microbiology; pg. 422-425; March 1991.	
	7	HOFFMAN ET AL.; Bone Marrow Aspirate Culture Superior to Streptokinase Clot Culture and 8 ML 1:10 Blood-To-Broth...; American Society of Tropical Medicine & Hygiene; pg. 836-839; 1986.	
	8	AL-SOUD ET AL.; Purification and Characterization of PCR-Inhibitory Components in Blood Cells; Journal of Clinical Microbiology; pg. 485-493; February 2000.	
	9	MORATA ET AL.; Diagnostic Yield of a PCR Assay in Focal Complications of Brucellosis; Journal of Clinical Microbiology; pg. 3743-3746; October 2001.	
	10	LI ET AL.; Effects of Volume and Periodicity on Blood Cultures; Journal of Clinical Microbiology; pg. 2829-2831; November 1994.	
	11	KLEVEZAS ET AL.; Single-Step PCR for Detection of Brucella spp. from Blood and Mild of Infected Animals; Journal of Clinical Microbiology; pg. 3087-3090; December 1995.	

Examiner Signature		Date Considered	
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	12	ORTUNO ET AL.; Rapid Diagnosis of Human Brucellosis by Peripheral-Blood PCR Assay; Journal of Clinical Microbiology; pg. 2927-2930; November 1997.	
	13	GSMBOA ET AL.; Detection and Identification of Mycobacteria by Amplification of RNA and DNA in Pretreated Blood and Bone...; Journal of Clinical Microbiology; pg. 2124-2128; August 1997.	
	14	MORATA ET AL.; Posttreatment Follow-Up of Brucellosis by PCR Assay; Journal of Clinical Microbiology; pg. 4163-4166; December 1999.	
	15	HAMILTON ET AL.; Effect of Delay in Processing on Lysis-Centrifugation Blood Culture Results from Marrow Transplant Patients; Journal of Clinical Microbiology; pg. 1588-1593; July 1989.	
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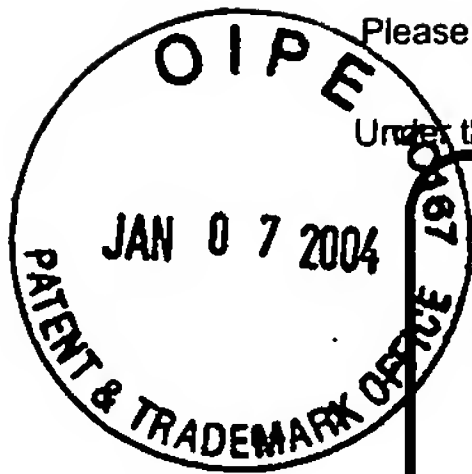
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	26	CASSELS ET AL.; The Interaction of Streptokinase-Plasminogen Activator Complex, Issue-Type Plasminogen Activator, Urokinase and Their Acylated...; Journal of Biochem; pg. 395-400; 1987.	
	27	CASTELLINO; Biochemistry of Human Plasminogen; Seminars in Thrombosis & Hemostasis; vol. 10, no. 1; 1984.	
	28	MILES ET AL.; Binding and Activation of Plasminogen on the Platelet Surface; Journal of Biological Chemistry; vol. 260, no. 7; pg. 4303-4311; April 1985.	
	29	GAFFNEY ET AL.; Plasma Fibrinogen and its Fragments During Streptokinase Treatment; British Journal of Haematology; 1974.	
	30	MALIN ET AL.; Effect of Tetrahydropyrimidine Derivatives on Protein-Nucleic Acids Interaction; Journal of Biological Chemistry; vol. 274; pg. 6920-6929; March 12, 1999.	
	31	MALIN ET AL.; Induction of Synthesis of Tetrahydropyrimidine Derivatives in Streptomyces Strains and Their Effect on Escherichia Coli...; Journal of Bacteriology; pg. 385-395; January 1996.	
	32	Phospholipase A2 from Bee Venom; Methods in Enzymology, vol. 71; 1981.	
	33	NGUYEN ET AL.; Thrombolysis Using Liposomal-Encapsulated Streptokinase: An In Vitro Study; vol. 192; P.S.E.B.M.; 1989.	

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### Completion

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	34	CAO ET AL.; The Purification and Characterization of a Phospholipase A in Hamster Heart...; Journal of Biological Chemistry; vol. 262, no. 35; pg. 16927-16935; December 15, 1987.	
	35	FISHER ET AL.; Lysosomal-type PLA2 & Turnover of Alveolar DPPC; Lung Cellular & Molecular Physiology; vol. 280; pg. 74-754; April 2001.	
	36	CHEN ET AL.; 1-Cys Peroxiredoxin, a Bifunctional Enzyme with Glutathione Peroxidase and Phospholipase A2 Activities; Journal Biological Chemistry; vol. 275; pg. 28421-28427; Sept. 2000.	
	37	SHIPOLINI ET AL.; Phospholipase A from Bee Venom; Journal Biological Chemistry; pg. 459-468; 1971.	
	38	MENASHE ET AL.; Hydrolysis of Dipalmitoylphosphatidylcholine Small Unilamellar Vesicles by Porcine Pancreatic...; Journal of Biological Chemistry; vol. 261, no. 12; pg. 5328-5333; 1986.	
	39	MOLLOY ET AL.; Proteomic Analysis of the Escherichia Coli Outer Membrane; Journal of Biological Chemistry; pg. 2871-2881; 2000.	
	40	SPONER ET AL.; Electronic Properties, Hydrogen Bonding, Stacking, and Cation Binding of DNA and RNA Bases; Institute of Biophysics; August 2001.	
	41	GONZALEZ ET AL.; Mechanism of Action of Polymeric Aurintricarboxylic Acid, a Potent Inhibitor of Protein-Nucleic Acid Interactions; American Chemical Society; 1980.	
	42	OBERBAUMER ET AL.; Detection of RNA on Northern Blots by Negative Staining with Aurintricarboxylic Acid; Journal Biochemistry; pg. 77-79; 1990.	
	43	GIVENS ET AL.; Inhibition of RNA-directed DNA Polymerase by Aurintricarboxylic Acid; Nucleic Acids Research; vol. 3, no. 2; February 1976.	
	44	HALLICK ET AL.; Use of Aurintricarboxylic Acid as an Inhibitor of Nucleases During Nucleic Acid Isolation; Nucleic Acids Research; vol. 4, no. 9; September 1977.	

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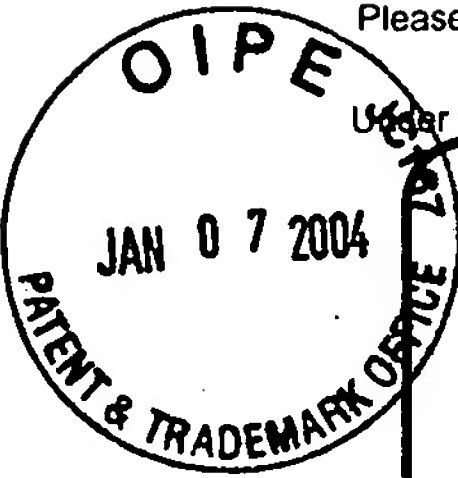
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	46	GONZALEZ ET AL.; Fractionation and Structural Elucidation of the Active Components of Aurintricarboxylic Acid, A Potent Inhibitor of Protein Nucleic Acid...; Biomedical Press; 1979.	
	47	BIRNBOIM, H.C.; Rapid Extraction of High Molecular Weight RNA from Cultured Cells & Granulocytes for Northern Analysis; Nucleic Acids Research; vol. 16, no. 4; 1988.	
	48	SKIDMORE ET AL.; Characterization and Use of the Potent Ribonuclease Inhibitor Aurintricarboxylic Acid for the Isolation of RNA.. Journal of Biological Chemistry; pg. 73-80; 1989.	
	49	TSUTSUI ET AL.; Fractionation of Aurintricarboxylic Acid & Effects of its Components on Nuclear Swelling & Nucleic Acid Synthesis; Biomedical Press; pg. 14-23; 1978.	
	50	NAKANE ET AL; Differential Inhibition of Various Deoxyribonucleic Acid Polymerases by Evans Blue & Aurintricarboxylic Acid; Journal of Biological Chemistry; pg. 91-96; 1988.	
	51	ROZALSKI ET AL.; Effects of Fibrinogen Receptor Antagonist GR144053F & Aurintricarboxylic Acid on Platelet Activation and Degranulation; Biochemical Pharmacology; pg. 1399-1408; 2001.	
	52	BROWNE ET AL.; Binding Studies of Cationic Thymidyl Deoxyribonucleic Guanidine to RNA Homopolynucleotides; July 1995.	
	53	HUANG ET AL.; Electric Manipulation of Bioparticles and Macromolecules on Microfabricated Electrodes; Analytical Chemistry; vol. 73, no. 7; April 1, 2001.	
	54	CHENG ET AL.; Isolation of Cultured Cervical Carcinoma Cells Mixed with Peripheral Blood Cells on a Bioelectronic Chip; Analytical Chemistry; vol. 70, no. 11; June 1, 1998.	
	55	LI ET AL.; Transport, Manipulation, and Reaction of Biological Cells On-Chip Using Electrokinetic Effects; Analytical Chemistry; vol. 69, no. 8; April 15, 1997.	

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	56	YANG ET AL.; Granted, Stacked Microlaboratory for Biological Agent Detection with DNA & Immunoassays; BioSensors&BioElectronics; pg. 605-618; 2002.	
	57	EDMAN ET AL.; Electric Field Directed Nucleic Acid Hybridization on Microchips; Nucleic Acids Research; vol. 25, no. 24; 1997.	
	58	EWALT ET AL.; Detection of Biological Toxins on an Active Electronic Microchip; Analytical Biochemistry; pg. 162-172; 2001.	
	59	FORSTER ET AL.; A Laminated, Flex Structure for Electronic Transport & Hybridization of DNA; BioSensors & BioElectronics; pg. 187-194; 2001.	
	60	BOOM ET AL.; Rapid and Simple Method for Purification of Nucleic Acids; Journal of Clinical Microbiology; vol. 28, no. 3; pg. 495-503.	
	61	BRUISTEN ET AL.; Stability of HIV-1 RNA in Blood During Specimen Handling and Storage Prior to Amplification by NASBA-QT; Journal of Biomedical Methods; pg. 199-207; 1997.	
	62	READ, S.J.; Recovery Efficiencies of Nucleic Acid Extraction Kits as Measured by Quantitative LightCycler PCR; Journal of Clinical Pathol; pg. 86-90; 2001.	

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